

# Landbird Monitoring Protocol for Klamath Network Parks

## Standard Operating Procedure (SOP) #7: Conducting Area Search Surveys

Version 1.0

### Revision History Log:

Previous Version	Revision Date	Author	Changes Made	Reason for Change	New Version

This SOP includes the methods for conducting area search surveys. The Area Search Data Form is provided at the end of this SOP.

### Timing of the Survey

Area search surveys are conducted at least twice during each banding effort. If capture rates are slow, or extra persons are available at the station, multiple area searches should be completed. Surveys for the day should be done between sunrise and 5 hours after dawn. The order of search areas covered should vary from effort to effort. The first survey is done as the nets are set up. If the temperature and/or bird activity is low, wait until it warms up a bit to begin the first area search. One person starts setting up the nets and the other person completes the area survey. After 20 minutes, the surveyor (back at the start of the net round) begins to help set up nets (SOP #6: Mist Netting). Then, if possible, a second survey is conducted when bird captures have slowed down, often about 0930. Surveys should not be conducted in rain, strong winds, or extreme weather conditions.

### Location of the Survey

A map of the area search survey plots for the Oregon Caves station is included in SOP #4: Locating and Marking Field Sites.

### Conducting the Survey

One or more observers walk a 20-minute route, noting all birds seen or heard. The person who is the best birder should conduct the survey; the other surveyors should practice as time allows. The observer should be reasonably familiar with most (if not all) bird species likely to be encountered at the site. This method allows the observer to track down unfamiliar birds. Walking the site before a survey with a person familiar with the birds allows the less experienced observer to be more efficient.

Walk in an approximate circle or oval for exactly 20 minutes in each search area, stopping or moving to investigate sightings or calls when appropriate. Do not spend more than a minute

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looking for a difficult bird. If there is an unknown bird that can not be identified, record it on your form as unknown (UNKN). Record numbers of birds of each species seen, heard, or both seen and heard in the search area during this time on the Area Search Data Form. Record birds outside the search area, as defined by the route you take, separately on your data sheet, but concentrate on finding as many birds as possible within the site. For birds heard calling, you may have to estimate whether they are inside your area or not. Note that this 20-minute time constraint is an extremely important component of the technique, as the data are to be used for monitoring.

Record data as follows:

**Page:** The page number of current page and the total pages for the survey route.

**State:** OR.

**Project:** NPLTM.

**Station Code:** ORCA.

**Station Name:** Oregon Caves.

**Point:** The area search letter (ORCAA or ORCAB).

**Month-Day-Year:** The date of the survey using two numbers for month and day and four numbers for year.

**Observer Initials:** The first, middle, and last name initials of the observer.

**Secondary Observer Initials:** The first, middle, and last name initials of secondary observers.

**Temp.:** The temperature at the beginning of the survey recorded in degrees Celsius.

**Cloud Cover %:** The estimated percent of cloud cover at the beginning of the survey.

**Ppt:** The type of precipitation at the beginning of the survey. N = None, F = Fog, M = Mist, D = Drizzle, R = Rain.

**Wind:** The wind at the beginning of the survey using the Beaufort Wind Scale class. 0 = calm, 0-1 mph, smoke rises vertically and the sea is mirror smooth. 1 = light air, smoke moves slightly with breeze and shows direction of wind. 2 = you can feel wind on your face and hear the leaves start to rustle. 3 = gentle breeze, small branches start to sway, wind extends a light flag. 4 = moderate breeze, loose dust or sand on the ground will move and larger branches will sway. >4 = Do not survey, too much wind.

**Start Time:** The time (using a 24-hour clock) that you started your 20-minute search.

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**Duration:** Duration of survey in minutes, 20.

**Species Code:** The standard four letter species code.

**Species Name Abr:** The full common name or a clear abbreviation for the bird.

**On Area:** The numbers of each bird species counted on or within the search area. Birds seen, heard, or both should be counted.

**Detection Type:** Tally the birds detected during the survey by writing down the first detection type that the observer uses to identify the bird species. S = Song, C = Call, V = Visual, W = Wing (e.g., Mourning Dove or Hummingbird wing whirl), D = Drumming, F = Fly over (e.g., SCC = one bird singing and two calling).

**Off Area:** The numbers of each bird species counted off or outside the search area. Birds heard, seen, or both should be tallied. Birds flying over the site (excluding those aerial foraging within the search area) should be counted here.

**Total:** The total number of the birds tallied in the ON or OFF AREA columns.

**Breeding Status:** Any breeding evidence observed during the count. N = current year's Nest found in the study area with eggs or young, in the process of being built, or already depredated or abandoned. M = adult seen gathering or carrying nesting Material to a likely nest site in the study area. F = adult seen carrying Food or Fecal sac to or from a likely nest site in the study area. D = Distraction display or injury feigning by an adult bird. L = a young bird incapable of sustained flight (a "Local") in the study area or very young (stub-tailed) fledglings being fed by parents in the study area. C = Copulation or Courtship observed of a species within its breeding range. T = other Territorial behavior observed. S = territorial Song or drumming heard.

**Notes:** Record any survey notes here (e.g., noise disturbance, location information, other sightings, etc.).

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Area Search Data Form															Page		of		
State		Project/Region			Site Code			Site Name			Point		Month	Day	Year				
Obs. Initials		Secondary Obs. Initials			Temp. (C)		Cloud Cover (%)		Ppt	Wind	Start Time (24 hr)			Duration (minutes)					

[illegible]

Notes:

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Precipitation (Ppt): N = None, F = Fog, M = Mist, D = Drizzle, R = Rain. Wind (Beaufort): 0 = calm, 1 = light air, 2 = leaves start to rustle, 3 = small branches start to sway, 4 = moderate breeze, >4 Do not survey

Detection Type: S = Song, C = Call, V = Visual, W = Wing, D = Drumming, F = Fly over.

Breeding Status: N = active Nest, M = carrying nesting Material, F = carrying Food or Fecal sac,

**D** = Distraction display/feigning, **L** = Local young (limited flight or stub-tailed fed by parents), **C** = Copulation or Courtship observed, **T** = Territorial behavior, **S** = territorial Song or drumming.

Observer's Full Names \_\_\_\_\_ Checked \_\_\_\_\_ Copied \_\_\_\_\_ Entered \_\_\_\_\_